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GROUT INFILTRATION MONITORING WELLS

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

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REPLY TO THE ATTENTION OF:

MAR 13 1995

Mr. Jack R. Craig
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

HRE-8J

RE: Grout Infiltration in
Monitoring Wells

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the Grout Infiltration in Monitoring Wells Report. This report documents an investigation initiated, as a result of a downhole camera survey confirming grout infiltration in monitoring wells, to determine the impact of grout on water quality analyses and what caused the grout infiltration.

The report presents a technically valid analysis and acceptable recommendations. However, the recommended monitoring well design modification does not strictly conform to the requirements of U.S. EPA's Technical Enforcement Guidance Document, 1986. The design modification differs from U.S. EPA guidance in that the natural aquifer materials will be allowed to collapse in the annular space around the well up to the water table in the "type 3 wells" or up to the elevation of the base of the "blue clay" in the "type 4 wells." Because the lower permeability zones of silt or clay are generally absent in the Great Miami Aquifer, the collapsed natural aquifer materials in the annular space should not produce a preferential pathway of groundwater flow, and result in groundwater samples that may not be representative of actual aquifer characteristics.

The United States Department of Energy should be aware that the design modification does pose some risk if the natural aquifer materials in the annular space does not collapse adequately and forms a preferential pathway for groundwater flow. This situation could potentially draw contaminated groundwater from the upper portions of the aquifer to its lower portions.

Therefore, U.S. DOE should consider any other actions to reduce the risk of contaminating the lower portions of the aquifer. Considering the site-specific conditions of the Great Miami Aquifer and that the facility is beyond the remedial investigation phase and completing the feasibility study for Operable Unit 5, U.S. EPA approves the recommended modification for well installation to prevent grout infiltration in type 3 and 4 wells.

Please contact me at (312) 886-0992 if you have any questions regarding this matter.

Sincerely,

James A. Saric, Remedial Project Manager
Technical Enforcement Section #1
RCRA Enforcement Branch

cc: Tom Schneider, OEPA-SWDO
Jack Baublitz, U.S. DOE-HDQ
Don Ofte, FERMCO
Jim Theising, FERMCO
Terry Hagen, FERMCO